September 30, 1996

VIA Hand Delivery

Docket Office
California Public Utilities Commission
505 Van Ness Avenue, Room 2001
San Francisco, California 94102

Re: R.94-04-031/I.94-04-032

Dear Docket Clerk:

Enclosed for filing in the above-entitled matter are the original and five copies of the **Comments of the California Energy Commission on the August 30, 1996, Report to the CPUC by the Direct Access Working Group (DAWG)**. Please return the extra copy in the enclosed, stamped, self-addressed envelope. Thank you for your attention to this matter.

Very truly yours,

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Enclosures

cc: Linda Serizawa, CACD (via hand delivery)
Michelle Cooke, CACD (via hand delivery)
Restructuring Service List

BEFORE THE CALIFORNIA PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking The Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation	)))))	R.94-04-031 (Filed April 20, 1994)
Order Instituting Investigation on the Commission Proposed Policies Governing Restructuring California Electric Services Industry and Reforming Regulation	)))))	I.94-04-032 (Filed April 20, 1994)

COMMENTS OF THE CALIFORNIA ENERGY COMMISSION ON THE AUGUST 30, 1996, REPORT TO THE CPUC BY THE DIRECT ACCESS WORKING GROUP (DAWG)

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September 30, 1996

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I. Introduction and Overview

In accordance with the May 20, 1996 Assigned Commissioner Ruling (ACR), the California Energy Commission (CEC) hereby submits its comments in response to the August 30, 1996 Direct Access Working Group report, "Design and Implementation of Direct Access Programs" (DAWG Report).

The CEC believes the DAWG Report provides a major step forward in bringing to light the many details necessary for full scale implementation of Direct Access. We believe this working group has fully satisfied any reasonable expectations for a work product developed by so many parties with so many disparate interests. The CEC urges the California Public Utilities Commission (CPUC) to consider how to put this working group effort to work on further tasks of implementation of Direct Access.

I-1. General Recommendations

The CEC has long supported meaningful consumer choice as a guiding principle of industry restructuring. We have frequently articulated our philosophy as "maximum choice for the maximum number of customers," with the caveat that choice is not an end in itself, but must serve as a tool to enhance societal economic efficiency. We have followed this approach in developing our recommendations for implementing Direct Access.

The many details discussed in the DAWG report, and the possibility of adversarial adjudication of them by opposing parties, raises the prospect of lengthy hearings. We believe that it is essential for the CPUC to find a way to allow parties to advocate their case, yet move swiftly toward the major decisions shaping Direct Access programs. We believe it is essential for stakeholders in California to obtain clear signals about the broad elements of Direct Access -- phasing, metering, load profiling, access to customer information, etc. -- as quickly as possible. Many new participants in

competitive markets must begin making their own plans, which can proceed in parallel with subsequent efforts to refine the details of implementation, once the major elements have been decided by the CPUC.

In Chapter 1, Section 1.3, the DAWG report presents a procedural option which we find persuasive. We believe the CPUC should seriously consider dividing this proceeding into three phases. Phase 1 would consist of adjudication of the major items noted in Chapter 1, Section 1.2, of the DAWG Report, and would conclude with a CPUC policy decision for those issues. This decision would also direct resumption of the working group process, with a mission to develop one or more complete implementation plans based on the major decisions of Phase 1. Phase 2 would comprise the working group process to develop proposals that fully address all of the issues described in the DAWG report, and conform to the major decisions and any guidance made in the Phase 1 decision. Phase 3 would consist of CPUC review of these proposals, hearings to adjudicate serious issues, if necessary, and decisions to direct actual implementation of its Direct Access program. The CEC will do everything possible to support and contribute to such a process.

I-2. Recommendations on Major Issues

This description of the major elements of Direct Access programs summarizes CEC positions described fully in subsequent sections of these Comments.

I-2.1 Phase-In of Direct Access Eligibility (Section II of these Comments)

Direct Access opportunities should be made available to all customers as quickly as possible. Phase-in should only be permitted if there are technical limits. If there are any limits, they stem from transactions processing capabilities for metering, data communications, or imbalance identification and allocation. Technical limits should be assessed in light of decisions assigning responsibility to UDCs and others for various

transactions-processing activities. All customers should be notified of Direct Access opportunities, and the results of an open season solicitation should be compared with any transactions processing limitations. A pre-determined contingency plan to ration participation should be implemented if necessary. If transactions processing constraints are found, they should be reduced or eliminated as quickly as possible to allow the greatest participation at the earliest possible date.

I-2.2 Facilitating Meaningful Consumer Choice (Section III)

The CEC believes that simply providing choice to consumers is not sufficient. We must undertake specific efforts to ensure that there are well functioning markets that permit all classes of customers to make informed choices among meaningful alternatives. Customers should have opportunities to achieve significant gains in the value they receive from their expenditures. To accomplish this requires the creation of markets for unbundled electricity services with low transactions costs, where service and product information is trustworthy and widely available, where consumer protection efforts provide dispute resolution and detect systematic problems, and where consumer education enables customers to take advantage of market information to make appropriate choices.

I-2.3 Governance of the Competitive Market (Section IV)

Competitive markets will need some governing rules and institutions to ensure appropriate behavior. AB 1890 provides authority to the CPUC to conduct a weak registration and dispute resolution mechanism. We believe more substantial market rules, such as discussed within the DAWG report, will be required. The authority and resources to implement them must be vested in a regulatory agency knowledgeable about energy issues. Further, specialized rules applicable to particular market entities, such as the Scheduling Coordinator, must be created and enforced. The state must

assert jurisdiction over Scheduling Coordinator-customer interactions even though FERC can be expected to regulate ISO-Scheduling Coordinator interactions.

I-2.4 Metering, Data Communications and Information Management (Section V)

Information requirements of the restructured market should drive the design and implementation of new systems -- hardware, software, protocols, and institutional arrangements -- for metering, data communications and information management. Even though hourly interval metering with electronic data communications should be the norm for participation in Direct Access, small commercial and residential customers should be permitted to use appropriate load profiling procedures for a limited period while a state policy of universal metering is being implemented. A comprehensive view of the information needs of all market participants, assessed from the perspective of long run societal economic efficiency, should be used to develop new institutional arrangements and to design and implement metering and data communication systems to support these arrangements.

We expect that a combination of private businesses and monopolies (regulated or non-profits controlled by all stakeholders) will emerge as the best way to conduct various facets of this activity. The decisions that will determine this outcome are strongly related to the issues now pending before the CPUC on distribution function unbundling (see Ratesetting Working Group report and subsequent Comments), but extend beyond electricity. More than half of the customers involved are dual fuel customers of PG&E and SDG&E, and natural gas metering and meter reading will be vitally influenced by electricity metering decisions. Therefore, the data communications and information management solutions that the CPUC should devise must address the inter-related requirements of multiple services (electricity, natural gas, and domestic water supply).

I-2.5 Monitoring, Cost Recovery, Franchise Fees (Section VI)0

The complexities of Direct Access, and the potential for having to phase-in eligibility if demand exceeds transactions processing capabilities, will require the CPUC to have a strong monitoring role. It is becoming more clear that there will be transitional mechanisms, like load profiling, that enhance the ability to begin Direct Access, but that should be eased out as universal metering is implemented. Utilities in 1997, and UDCs beginning in 1998, will likely have substantial expenditures that should be recovered by some appropriate mechanism. Many jurisdictions will have concerns about, and will need to adjust franchise fee and user surcharge fee mechanisms to ensure that industry restructuring is fiscally neutral for them. The CPUC should provide support to these jurisdictions.

I-2.6 Further Use of Stakeholder Working Groups (Section VII)

The great number of details discussed in the DAWG report reveal the complexities of implementing Direct Access. Further, there are strong interactions with the UDC distribution function unbundling process and the many FERC jurisdictional issues of ISO and Power Exchange formation that must dovetail properly. We believe that the CPUC should make an initial decision that addresses the major elements of Direct Access programs, and then direct a representative stakeholder group to develop one or more implementation plans for subsequent CPUC review. This is the best method of developing an implementation plan that properly interconnects activities happening in several different forums.

In addition, there are several topics that the DAWG process could not complete in time for its August 30 filing that should be continued. We believe the working group process, either DAWG or a series of new, more focused working groups, is appropriate

for this activity if is it directed to accomplish carefully defined missions by the CPUC. Two tasks for such working groups -- developing specific requirements for load profiling, and finalizing Scheduling Coordinator procedures for transactions with customers -- should be pursued immediately so that the results can be incorporated in proposed implementation plans. Two additional subjects -- developing proposed standards for metering and data communication systems, and addressing long-term customer information management -- should begin now, but need not be completed in time for inclusion in implementation plans.

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In our Comments below, each of the sections and subsections contains: (1) a brief introduction to the topic followed by a "position summary" describing the salient features of the CEC position; (2) a more detailed discussion of the background and the specific issues the CEC positions are meant to resolve; and (3) more detailed or focused position statements on certain issues.

II. Phase-In of Direct Access Eligibility

II-1. Determining the Need For and Parameters Of a Phase-In

Phase-in of eligibility is, perhaps, the fundamental issue addressed by the DAWG. CPUC Decision D.95-12-063 ordered initial implementation of Direct Access no later than 1/1/98, and with no more than a five-year phase-in schedule for all customers to be eligible to participate. D.96-01-006 clarified that Direct Access was to begin as soon as possible, but not later than 1/1/98, and that only technical and other policy considerations could be used to justify any multi-year phase-in proposal. AB 1890 largely accepted the CPUC's framing of the Direct Access issue, but does require that full eligibility be achieved by 1/1/2002, one year earlier than the CPUC requires.

DAWG Report, Chapter 4, addresses three categories of rationales for a gradual phase-in: technical (related to the capability of utility systems to process large numbers of Direct Access transactions without threatening system performance), market success (related to customer service and marketing capabilities), and equity (related to equitable representation of all customer groups). Virtually all of the specific factors assessed within these categories were disputed among the DAWG participants.

Position Summary: We urge the CPUC to implement universal availability of Direct Access as quickly as possible. We recognize that there may be technical limits on the number of transactions that essential systems (the ISO, the Scheduling Coordinators, and utilities or UDCs) will be able to manage by 1/1/98, and that such limits may necessitate a phase-in of Direct Access eligibility. We recognize also that some customer classes may not be prepared to take advantage of Direct Access by 1/1/98, which means that the availability of Direct Access must be accompanied by a well-conceived and executed consumer education program.

The Energy Commission therefore recommends that the CPUC order and oversee the following steps, to begin as quickly as possible:

[1] Determine the 1/1/98 transaction-processing capabilities of the essential systems;
[2] Conduct a universal consumer education program (see Section III-5 of these Comments);

[3] Develop a contingency plan for rationing Direct Access eligibility if necessary;

[4] Solicit consumer interest in Direct Access, but inform consumers that eligibility may need to be postponed for some customers if demand is too great;

[5] Compare solicitation response with technical limit, and implement rationing plan if necessary. Otherwise declare all customers eligible for Direct Access on 1/1/98.

The question of subsequent phase in (1999 and later) should be decided after the technical limits and the demand for 1998 have been assessed. Any subsequent phase-in schedule should be directly linked to expansion of transactions-handling capacity. There should be no rationing of eligibility based on arbitrary MW shares of total utility load.

Issue II-1.1: Should Direct Access programs be phased-in in light of technical and other policy concerns?

Discussion: A large number of complex hardware and customer contact protocols need to be developed and prepared for large scale implementation. Four of them were assessed in the DAWG Report, Chapter 4, Section 4.2.2. These were: (1) demonstration of integrated system performance; (2) data processing capabilities of the UDC, Scheduling Coordinator, ISO, and aggregators; (3) metering and data communication systems; and (4) UDC billing systems. In addition, participants were concerned that Direct Access programs had to be equitable, by ensuring that customers of all classes participated, and that Direct Access programs be successful.

The technical concerns of hardware and software system development and implementation are valid. Proponents of phase-in see these systems as difficult to develop, crucial to proper cost allocation between participants and non-participants, and already behind schedule. They believe that the chances of implementing them in a manner that is workable, but does not shift costs to non-participating customers, is small if very large numbers are involved. If small numbers of customers express interest in Direct Access, then they can be accommodated with minimal problems. Therefore, phase-in is needed to ensure low levels of participation.

Opponents of phase-in do not necessarily reject these logical arguments. Rather, they tend to dismiss the assumptions. They do not believe that complex metering and data communication systems are needed. They do not believe that settlements need to be conducted on a daily basis. They do not believe that allocation of costs for each customer has to be carried out with accounting precision, given the way in which previous ratemaking practices have averaged rates among large groups of customers. Therefore, the opponents assert, the technical systems discussed in the DAWG Report are not essential for the implementation of Direct Access, especially if numbers of participating customers are low.

Both opponents and proponents of gradual phase-in seem to aspire to small numbers of customers participating, at least initially. Proponents want the comfort that a program will exist to ensure that the number is small, and to provide an orderly process to ration eligibility if demand turns out to be too high. Opponents believe demand will be small and that acceptable short cuts can be used in the initial year or two while more elaborate systems are being developed by competitive marketers. Both opponents and proponents of phase-in agree that the need for complex phase-in and rationing of eligibility depends entirely upon the demand by customers to participate.

Position: If responses to Direct Access solicitations are greater than the technical capabilities of utility systems to handle them (at this time, believed to be a few thousand customers per IOU), then a phase-in process should be implemented that will be directly linked to expansion of the capacity for handling Direct Access transactions. This phase-in process should be developed in advance of solicitations and triggered automatically if a large volume of customers requests to participate. Open season solicitation materials must include a caveat that informs customers they may be delayed if demand is excessive.

Issue II-1.2: Are there customer-level hardware and contractual requirements for participation in Direct Access? Can these requirements be used as a basis for limiting participation to a volume that the system can accommodate?

Background: DAWG Report, Chapter 4, Section 4.3.2, describes an alternative to rationing that limits participation to those customers who can demonstrate that they have a required set of hardware and contractual relationships with suppliers of services. Rather than imposing a predetermined limit on eligibility, participation would be guaranteed for all customers possessing the hardware and contractual requirements of Direct Access. If any of these requirements could not be supplied, then this fact would provide a "bottoms up" understanding of the rationale for phase-in and the specific bottleneck that was responsible. If appropriate, the bottleneck could be removed by easing requirements or by accelerating the development of additional capacity to supply the requirements.

Position: Customer-level requirements do not seem absolute at this time. For example, load profiling, if properly done, can be an acceptable near-term alternative to interval metering for small customers. Moreover, using customer-level requirements to ration participation will favor larger customers, who are more likely to be able to undertake any required investment. Rationing of participation, if needed as discussed in Issue II-1.1, should be based on a scheme that is more equitable to all customer classes.

Issue II-1.3: Is it in the public interest to educate customers about Direct Access opportunities? Is it in the public interest to help to create demand for Direct Access, perhaps to stimulate demand for which there may be no supply available, either because of technical limits or because of insufficient provider interest in serving small customers?

Background: As noted above, both opponents and proponents of phase-in for Direct Access believe that demand for this service, particularly among residential customers, will be low in the initial period following 1/1/98. This result may occur because the basic economics of participation are poor for most customers, or because consumers have not been adequately educated about their opportunities. Some DAWG parties have asserted that consumer education should deliberately try to stimulate interest in Direct Access, but others respond that such an effort may create demand that is not capable of being satisfied, at least during the initial period.

Position: Consumer education programs should inform customers in a neutral way about the features of the new market place and the opportunities that may become available. Because the economics of participation for small customers and the extent of provider interest in serving those customers are not yet known, and because it would be detrimental to create expectations that may not be fulfilled, we believe that consumer education should not advocate or promote Direct Access participation. As more is learned about these unknown factors, education programs should be reexamined and modified as appropriate. In particular, if the early solicitation of customer interest (see the Position on Issue II-1.1) reveals potentially strong demand among smaller customers, the education effort should clearly explain how rationing will be performed. (See Section III-5 of these Comments for a more complete treatment of Consumer Education.)

Issue II-1.4: If Direct Access is phased-in, what factors should determine the limits to eligibility?

Discussion: Despite the use of MW of capacity to describe phase-in in the SCE et al MOU, virtually all of the DAWG discussions about technical limitations seem to be traceable to numbers of customers participating, not the volume of consumption or the peak demand they impose on the system. These transactions-based limitations could

come, for example, at the Scheduling Coordinator step of handling generation and load nominations and settlements, or at the UDC step of metering actual usage and uploading that data to a central facility for use in billing, distribution system planning, etc. It will take time to install the hardware needed to collect and transfer usage data for all customers and to develop the computer systems to process these transactions.

Position: Eligibility should be limited only by the numbers of transactions the entire set of Scheduling Coordinators can handle on a daily basis and the numbers of daily uploadings of hourly metered usage data the UDCs can process.

Issue II-1.5: Should all customer classes be represented in Direct Access programs? If special efforts are needed to ensure representation of all customer classes, what is the best way to accomplish this objective?

Background: D.95-12-063 directs implementation of Direct Access in a manner that ensures that all customer classes have a fair opportunity to participate. AB 1890, Section 365 (b)(1) directs a phase-in program to "...be equitable to all customer classes and accomplished as soon as practicable." Both the CPUC and the Legislature would prohibit a Direct Access program available only to industrial and large commercial customers; they clearly require a meaningful opportunity for residential and small commercial customers to participate.

The difficulty is to determine whether Direct Access should be constrained for some customer classes so as to make room for other customer classes. The current evidence suggests this is precisely the dilemma that will be faced. If each Direct Access customer represents one transaction, a large share of the population of large customers, and hence a large proportion of existing MW capacity, may be accounted for by a relatively small number of transactions, while even a moderate transaction-based limit may admit only a tiny proportion of the small-customer population. Thus, a

transaction-based limit would seem to preclude widespread participation by small customers.

The use of load profiling in conjunction with aggregation is a way to mitigate this problem. Such an arrangement could serve a large number of customers while imposing a much smaller number of transactions on the system, because load profiling would be based on statistical estimation of hourly usage rather than actual measurement of hourly usage for all customers. The actual level of sampling required to ensure reasonable accuracy of load profiles needs to be determined, but discussions in the DAWG suggest that it may be about ten percent. Such a sampling rate would mean that 10,000 aggregated customers would impose only 1,000 transactions on the system.

Position: Given a viable and statistically sound program of aggregation based on load profiling, it will not be necessary to reserve specific shares of Direct Access eligibility in advance for any customer class. To the extent open season solicitations result in demand that exceeds the transaction processing capability of existing systems, customers may be rationed according to the numbers of transactions implied by their proposed Direct Access arrangements, and such rationing could be fully consistent with equitable representation of all customer classes.

II-2. The Details of Phasing-In Eligibility

The DAWG identified a number of issues concerning the details of customer phase-in. At the time of these Comments and until the CPUC provides guidance on the larger issues discussed in the previous section, it is premature to invest in developing the detailed implementation plan that these micro issues call for. If the CPUC decides to move forward with a universal open-season solicitation backed up by a contingency plan for rationing eligibility, the issues listed below are some of the major ones such a contingency plan would have to address.

Issue II-2.1: Rationing of over-subscription. If an open season solicitation determines that a phased Direct Access program is required, how should this over-subscription be resolved?

Issue II-2.2: Limitation on customer size. Should the amount of energy consumption or peak demand be limited for a customer participating in Direct Access?

Issue II-2.3: Continuity of participation. If a customer is selected to participate in an initial phase of Direct Access, should this customer automatically be included in later phases?

Issue II-2.4: Structuring participation to maintain industry parity. Should business customers in industries where electricity costs are important be treated in special ways to ensure that all competing firms in the industry have the same Direct Access opportunities?

Issue II-2.5: Under-subscription of phase-in solicitations. If a solicitation results in under-subscription by a particular customer class for a particular phase, can excess eligibility be transferred to another class? How should eligibility rules be modified for subsequent phases of the program?

Issue II-2.6: Customer options for partial participation. Should customers be allowed to offer only a portion of their load for participation in Direct Access?

III. Facilitating Meaningful Consumer Choice

III-1. Customer Usage Measurement in the Restructured Electricity Market

Position Summary: In the restructured market, each electricity customer will need to report hourly usage. In the near term, hourly usage may be either measured directly by interval meters or estimated using load profiles, but eventually all customers should be capable of reporting their measured hourly usage. If load profiling is adopted as an interim device, a schedule for its phase-out should be specified and should be linked to the universal implementation of interval meters and associated data communication systems (see Section V-2 below).

Because the cost of interval meters is relatively small for medium to large customers, only small commercial and residential DA customers should be allowed to report estimated usage. For these customers, the CPUC should specify a load-profiling methodology and appropriate standards of accuracy to ensure against cost-shifting between customer groups.

Issue III-1.1: Should all customers be required to provide measured hourly energy usage data as a condition of participation, or can estimates through load profiling be permitted?

Background: WEPEX and DAWG agree that the general standard of participation in the restructured market is hourly information accessed daily. Rather than require every customer to install and utilize an interval meter and an electronic communication system for uploading data, is estimation using load profiling techniques be acceptable? DAWG Report, Chapters 4 and 10 describe load profiling as an alternative to interval metering of each customer. Load profiling may also serve the needs of the UDC, since its purchase of power from the PX and its settlement for imbalances require essentially the same information as does an aggregator for its non-metered customers.

Position: Load profiling is an acceptable transition technique on the way toward universal interval metering, as long as the estimation technique provides hourly data on a daily basis as if it were actually measured for each customer. UDCs and aggregators should utilize a common methodology to ensure against cost shifting from one customer class to another.

Issue III-1.2: If estimates through load profiling are permitted, for what customer classes and for how long should this be permitted?

Background: Load profiling will create inaccuracies relative to a universal interval-metering system. The consequences of any errors are greater for larger customers. The costs of installing metering and communication systems are small in comparison to energy costs for medium-sized commercial and larger customers.

Position: Load profiling should only be permitted for residential and small commercial customers as defined in AB 1890, and only as a temporary measure while a universal interval-metering system is being implemented.

III-2. Unbundling and Competitive Supply of Distribution Component Services

While unbundling of the distribution function into component services is formally assigned to the Ratesetting Working Group (RWG), the subject is of fundamental interest to the DAWG parties. Consumers and emergent suppliers are vitally interested in whether services they expect to provide as a normal course of their business relationship with customers may be done in parallel or in concert with similar services presently undertaken by the utility and prospectively assigned to the UDC. The services most frequently discussed are the so-called "revenue cycle" services, which may be categorized into five general groups: measuring usage,

communicating measured usage data to a data-processing facility, managing a central historical customer-usage database, preparing and submitting the customer bill, and finally, collecting and processing payments.

Position Summary: It is essential to distinguish between unbundling of component services, by which we mean identification and separation of the services and their costs, and competitive or other non-utility provision of the services. We believe that unbundling of some revenue cycle services, with various levels and qualities of service to be supplied by the UDC but without competitive provision, may be essential for implementation of Direct Access by 1/1/98, and may well be feasible by that date. Competitive supply of some of these components can be allowed at a later date.

Issue III-2.1: Which component services within the distribution function should be unbundled?

Background: CPUC D.95-12-063 assigns all distribution and customer services to the UDC. It permits non-utilities to install meters once a standard is developed and implemented. In D.96-03-022, the CPUC initiated an unbundling investigation to be pursued by the Ratesetting Working Group (RWG), but the parties to that group could not resolve some fundamental differences. On August 26, 1996, the RWG submitted a report containing five unbundling options, and on September 13, 1996, parties filed Comments on the RWG report. The issue is now in the hands of the CPUC for decision and/or further guidance.

There are five categories of services that seem most directly connected to participation in Direct Access. In the RWG report SDG&E calls these the "revenue cycle" services: (1) metering, (2) usage data collection and forwarding, (3) updating and maintenance of a usage history database, (4) billing for services, and (5) customer revenue handling and remittance to other entities. Unbundling and competitive supply opportunities exist for each of these, with various advantages and disadvantages from

the perspectives of energy service providers, consumers and UDCs. In the DAWG Report, metering, data communications and database management were addressed at length in Chapter 8, while billing and revenue handling were addressed in Chapter 9.

Position: The CEC supports unbundling of distribution component services and provision of alternative levels and qualities of service at different prices. We supported Option 4 as described in the RWG report of August 26, 1996 for the reasons set forth in our comments of September 13, 1996. Unbundling and creating new service options, but without competitive supply, may be the best interim solution, since the different needs of various customers could be accommodated by supplying varieties of these services for different fees, either directly to the end-use consumer or to the energy service provider as an intermediate service.

Issue III-2.2: If these services are unbundled, should they be made competitive?

Background: It is possible that the five groups of revenue-cycle activities, from usage measurement though revenue handling, should be treated differently because of the presence of natural monopoly aspects in some areas and the different ways competitive pressures might affect each of the activities.

Metering, by which we mean the installation and maintenance of the metering hardware, may be a good candidate for competitive provision. We should note, however, that recent developments in the UK's competitive metering industry reveal a shakeout that is approaching monopoly conditions for given geographic regions. It may turn out that metering is too directly linked to data communications to be a viable standalone industry. Since D.95-12-063 requires standards before non-utilities can install meters, unbundling and competitive supply of metering must be considered as two distinct steps, both of which are under the control of the CPUC.

Data communication includes all elements of the process that begins with collecting data from meters and ends with uploading that data to a central data-processing facility. The DAWG Report, Chapter 8, Section 8.8.6, documents the cost per customer of data communication systems for different degrees of customer saturation. Universal coverage appears to provide the lowest costs per customer. Multiple systems within a given geographic area would thus be more expensive, and would reduce the flexibility of customers to select different energy providers if there were not a common data communication architecture for all providers. As noted in Section V-2.2 of these Comments, it is also extremely important to examine the possibility of a data communication system that can handle electricity, natural gas, and water services, rather than to assume these three services will always be entirely separate.

The DAWG Report, Chapter 8, Section 8.7, provides some discussion of the database management activity. A usage database provides the basis for billing, but also provides the framework for load forecasting, distribution system analyses and public policy research. While billing may be quite feasible using decentralized databases (e.g. each energy service supplier maintains its own database for its own customers), the needs for load forecasting, distribution system analyses and research suggest there will be great value in having a unified, comprehensive consumption history database. (See Section V-1 of these Comments for further discussion.)

DAWG Report, Chapter 9, describes possibilities for competitive supply of the billing and revenue handling services now exclusively assigned to the UDC. While there are concerns with permitting these functions to be provided competitively, there seem to be fewer intrinsic difficulties for billing and revenue handling services than for data communications and database management, primarily because the systems issues are not as great as for data communications and database activities.

Position: Metering, billing, and revenue handling seem more suitable for competitive provision than do data communications and database management, although it is

premature to say conclusively which services can be made competitive and on what time schedule this might be done. (Metering, electronic data communication, and consumption database management are addressed in greater detail in Section V of these Comments.)

Some utilities assert that their current computer systems cannot be readily modified to expand the scope of their billing services to provide unbundled-component detail on customer bills. If the utilities are going to be faced with a major change in their requirements for customer billing, they ought to understand this prior to making major investments in new computers and applications software. We believe that any such investment should be attendant upon a decision from the CPUC on unbundling and further progress on the relevant issues by the RWG.

III-3. Facilitating Small-Customer Participation Through Aggregation

Many parties have expressed concern that Direct Access is only a means for large customers to take advantage of low cost power, and that residential and small commercial customers will need special mechanisms to ensure that the benefits of restructuring, such as low cost power, flow to all consumers. Load aggregation is an important mechanism to help enable residential and small commercial customers to participate in Direct Access. The fundamental issue is whether aggregation will be designed to ensure that large proportions of small customers participate, or to ensure that those who do participate pay their fair share of energy costs.

Position Summary: The CEC supports an aggregation approach that ensures participating customers pay their fair share of energy costs. Designing aggregation programs that rely upon cost shifting to achieve higher customer participation rates provides false price signals and perpetuates economic inefficiencies.

The DAWG Report, Chapter 10, provides a summary of many aggregation program issues, ranging from major to minor. These comments are limited to five of the more important ones.

Issue III-3.1: Should aggregation programs and requirements be developed in a way that facilitates participation of small customers to the maximum extent feasible, or should they be developed to ensure that all customers participating in Direct Access pay a fair share of costs?

Background: At the root of many specific disputes is the general conflict between maximizing participation versus fair allocation of costs. This is noted in the DAWG Report, Chapter 10, Section 10.2.1. Some parties argue that a high level of small-customer participation in aggregation is needed, and that anything lower is a failure of the policy decision that implements Direct Access. These parties tend to minimize the need for daily settlement of imbalances because they wish to promote greater participation in aggregation, even if this leads to improper allocation of costs and harmful impacts on non-participants. Other parties advocate strict rules to ensure that participants in Direct Access, including small customers who are likely to participate only through aggregation arrangements, pay all proper costs of participation. These parties are concerned that some means promoted by proponents of broad participation will lead to cost-shifting to those UDC customers who do not or cannot participate in Direct Access.

Position: The central goal of restructuring should be increased societal economic efficiency compared to past practices. This goal cannot be achieved if some activities or some customers receive subsidies at the expense of other customers, unless such subsidies directly serve some broadly shared social value, or customers have voluntarily entered into an aggregation agreement among themselves and have

agreed to accept any cost shifting within their pool of participants. Aggregation programs should be designed to ensure that participants pay fair shares of the overhead costs of creating these programs and all costs of their own participation.

Issue III-3.2: What requirements be imposed on aggregators to ensure that all customers have access to some aggregation arrangement?

Background: Various DAWG parties expressed concern that aggregation providers be required to serve all customers, to ensure that less desirable customers would not be bypassed. DAWG Report, Chapter 10, Section 10.3, discusses various aggregation models and rationales for and against them. There were two basic concerns.

First, private aggregation interests did not wish to have geographic restrictions, mandatory customer service or other requirements placed on them by those wishing to ensure that each and every customer has an opportunity to participate in Direct Access. AB 1890 does not appear to impose any obligation on private aggregators to offer service to customers on any basis other than mutual agreement.

Second, those wishing to ensure that all customers are able to participate in aggregation desired that public agencies be permitted to offer aggregation services for residents within the sphere of influence of the agency. AB 1890, Section 366 (b) and (c), clarifies that aggregation may be accomplished by a public agency, and that when a public agency does provide this service, it must offer it to all residential customers within its jurisdiction.

Position: The Energy Commission supports aggregation arrangements with no requirements on which customers a private aggregator must serve.

Issue III-3.3: Should Direct Access aggregators be able to use load profiling as a technique to reduce costs for their customers?

Background: The concept of load profiling surfaced during DAWG discussions as an alternative to actual interval metering for residential and small commercial customers. Many parties were concerned that the hardware associated with hourly interval meters and the data communication systems needed to allow daily settlement of imbalances would be too expensive to permit many of these customers to realize net benefits, and therefore they would not participate. The solution these parties advocated was to reduce the usage measurement and data collection cost of aggregation by allowing estimation of hourly loads using the load profiling concept.

Load profiling is a poorly understood concept. It means different things to different parties, hence communication about the issues has been difficult. We understand load profiling to mean relying on a sample of customers to represent a larger pool that would be served by an aggregator or a UDC.

Load profiling would consist of three basic steps. First, groups of customers having relatively similar load profiles would be determined using monthly energy consumption data, location, demographic factors, etc. There might be a substantial number of such customer groups. For each group, a representative sample would be selected using statistical sampling techniques. Second, for each customer selected by the sampling techniques, meters and communication systems would be installed in the same manner as was originally proposed for all Direct Access customers, i.e., an hourly interval meter and an electronic data communication system capable of uploading hourly consumption data on a daily basis to a central data processing computer. Third, a sample weighting system would be used to convert the actual load profiles of the sampled customers of a group into an estimated load profile for the average member of the group.

When processing data for aggregation customers, those customers who had actual interval-metered data would use their own data, while all other customers in the group

would use the group estimate. The central data processing systems and customer consumption database would be designed to accept hourly "data" for all customers in the same manner, with a flag to note whether the data was actually measured or estimated using an average load profile.

Position: Load profiling in lieu of actual interval metering is acceptable provided that the estimates satisfy accuracy standards. The process of using the data described above, combined with accuracy standards such as those outlined in DAWG Report, Chapter 10, Section 10.4.1, Alternative 10.4.1.1, would provide an acceptable means of ensuring that load profile data was accurate. Two related issues must be addressed early on in the development of load-profiling methodology: [1] access by aggregators to existing utility-held load profile information; and [2] the appropriate entity to perform ongoing verification of compliance with the standards.

Issue III-3.4: Should UDCs install metering and telemetry equipment at each ISO grid outtake point (i.e., transmission-distribution interface point) to enable more precise estimation of losses and allocation of imbalance costs among customers who do not have interval metering?

Background: The DAWG Report, Chapter 10, Section 10.2.5, notes that WEPEX has apparently proposed that only a fraction of the ISO grid outtake points should be metered. It observes, however, that metering all such points would help to allocate operational costs -- settlement of imbalances, losses, etc. -- to appropriate customers more accurately.

Position: The CEC supports metering of all ISO grid outtake points by 1/1/98 and the use of this data for settlement cost allocation, loss estimation, and transmission or distribution system utilization studies. Any request to delay full implementation should be fully justified and presented to the CPUC as early in 1997 as possible. If a delay is

authorized for some ISO grid outtake points, it should be based upon a prioritization of all such points with respect to their importance for resolving imbalance cost allocation issues, with the more important points being metered as soon as possible. Such a delay should not be a reason to defer implementation of Direct Access.

Issue III-3.5: What right of access to ISO grid outtake point data do aggregators have? If UDCs do install the metering and aggregators can access the data, how should UDCs and aggregators share the investment and operating costs needed to support this data collection activity?

Background: The DAWG Report, Chapter 10, Section 10.4.2, describes the possibility of aggregators and UDCs using ISO grid outtake point metering data to better understand loads and to allocate costs between their respective energy service customers. Since UDCs have responsibility for and operational control over the distribution system, it would appear logical that they install the metering and be responsible for collecting and processing the data. Aggregators and Scheduling Coordinators with customers at a given ISO grid outtake node would need this data for estimating loads of customers for which they had an energy supply arrangement. This would be particularly important for customers not using hourly interval metering, since the ISO grid outtake point might be the most disaggregated point at which hourly interval data were available for these customers' load-profile pools.

Position: Since UDCs will be regulated monopolies and not competitive energy service providers, the ISO grid outtake point metering data should be made available to aggregators and Scheduling Coordinators at a price which reflects the costs of equipment installation and maintenance and data acquisition and processing.

III-4. Access to Customer Information

Access to customer information has both near-term and long-term issues to be resolved. The primary near-term issue is how to enable access to existing utility-held customer data, to facilitate entry and viability of new retailers and aggregators, while safeguarding the privacy of customers. The primary long-term issue is how to guide the emergence of new arrangements for managing customer information in the mature market so as to best serve societal economic efficiency. This subsection deals with the near-term problem of making utility-held customer data available in advance of the opening of Direct Access on 1/1/98, as ordered by D.95-12-063. Long-term issues of information flows in the mature restructured market place are addressed in Section V-1.

The subject of access to customer information comprises all of Chapter 7 of the DAWG Report, which discusses a wide variety of options and positions regarding: the content of the information to be released, eligible recipients of customer information, customer privacy issues, customer consent mechanisms, proprietary rights, business conduct issues, recovery of costs and other topics. The lengthy position statement following Issue III-4.1 below addresses all of the most important near-term issues.

Position Summary: Utility-held customer information should be made generally available for a variety of purposes, including the marketing activities of registered electric service providers. The form of customer notification and consent required should depend on the particular information being released, as detailed below.

Issue III-4.1: Should the CPUC order a universal release of utility-held customer contact and usage information during 1997 to support implementation of Direct Access on 1/1/98? If so, what safeguards for customer privacy should be required?

Position: We recommend that the CPUC order the release of three specific types of utility-held customer information, each of which carries a different customer consent

requirement. We believe the logistics of preparing and releasing this information can be organized so as to avoid an undue burden on the utilities. The three information types are: [1] a small amount of data on all utility customers, except those who explicitly choose to withhold their data or "opt out" of the release, to enable prospective retailers to contact those customers they wish to serve; [2] a large amount of data on those customers who explicitly authorize or "opt in" to a release of their data; and [3] impersonal or aggregated data for which no customer is identifiable and hence requires no customer consent, such as typical usage levels and load profiles for narrowly defined customer groups, to facilitate market research.

[1] To facilitate Direct Access opportunities for smaller customers beginning on 1/1/98, the CPUC should direct the utilities to prepare a ***customer usage database*** for release to qualified retailers during summer or fall of 1997. The database should contain names, mailing addresses, utility account numbers, customer rate classes and one year's metered electricity usage for all residential and small commercial customers who consent to be included in it, and should be released to all qualified retailers in a standardized electronic format.

Customers should be notified of the intent to release their data through one or more utility bill inserts accompanied by a no-cost means of opting out, such as a prepaid return postcard. Customers who did not respond would be automatically included in the usage database. This relatively weak form of customer consent is appropriate in this case because of: [1] the relative non-sensitivity of the data being released; phone numbers, for example, would not be released for any customers to preclude the possibility of releasing unlisted customer phone numbers; [2] the availability of the data to only qualified retailers, who would agree to follow guidelines that prohibit certain unacceptable marketing practices and prohibit the release of the data to other parties; and [3] the potential benefits to consumers of a healthy competitive market place, for which this information release would reduce a significant entry cost for potential small-customer aggregators.

[2] If explicit authorization is obtained from a customer, that customer's complete energy record may be made available, including usage history, DSM program participation, energy audits, etc. An efficient way to obtain customer authorization, which builds upon another element of Direct Access implementation, would be to combine authorization with a solicitation of customer interest in the Direct Access program. This method of obtaining consent was used in New Hampshire in the context of that state's Direct Access pilot program.

[3] In addition to the above, utilities should also make available impersonal customer usage data, i.e., usage data for which no customer identification is attached. Such a release would contain usage levels and typical load profiles for narrowly defined subgroups of small customers, which would be used to support load profiling as a means to facilitate small-customer aggregation (see the full discussion of load profiling in Section III-3 of these Comments).

Cost recovery. The recipients of these various data releases should be required to pay prices for the data that fairly compensate the utilities for preparing and distributing it.

Issue III-4.2: Proprietary claims to and payment for customer information. Do utilities have any proprietary interests in customer information databases they have developed and maintained? If there are any such proprietary interests, do these enable utilities to control access to or use of these databases? If proprietary rights are found to be an operative factor, how should payment for access to these databases be determined?

Background: Certain utilities have argued that their customer data bases are corporate assets over which they retain the rights to control dissemination and to utilize for the benefit of their shareholders. Other parties have argued that customers

have the ultimate ownership of their own data, including full control over the use of that data and the right to be compensated for any economic uses of it. The ownership of utility-held customer information has been raised as an issue in at least one earlier CPUC proceeding (I.90-01-033) without resolution.

Position: A full resolution of all ownership issues is not required before the CPUC can order the utilities to make customer information available. If the utilities have any proprietary rights to customer information, such rights do not give them ultimate control over its use and dissemination, particularly when a significant public policy objective exists. The CPUC should proceed to order the information releases described above, and defer to a later proceeding or to a further stakeholder process the question of whether to compensate utilities, customers or any other party for any proprietary rights in customer information.

Issue III-4.3: Control of further dissemination of customer information. If metered usage and other customer data are made available to energy service providers, what restrictions on the use or dissemination of this data should be imposed?

Position: Any release of customer data to a limited group of recipients, such as registered electric service providers, should require the recipients' agreement to abide by consumer protection rules covering unauthorized release of the data to other parties and inappropriate marketing practices. Where customer identification is not associated with the data, no such rules are necessary.

III-5. Consumer Education

Consumer education is widely recognized as crucial to the success of restructuring. Many of the activities once bundled into integrated-utility electric service will be unbundled, and consumers may be required to take an active role in making service

choices. Most customers, however, are not prepared at present to participate in the Direct Access market and make good choices. The DAWG Report, Chapter 11, provided an initial review of consumer education issues, but further work is continuing and will be submitted in a second DAWG Report on consumer education and protection on October 30.

Position Summary: The CPUC should begin addressing consumer education issues now, as some education efforts should begin early in 1997. The early messages should be clear, informative and objective, and should not try to persuade consumers to choose any particular option. Consumer education should begin primarily as a utility function under CPUC guidance, and should involve more diverse entities as the competitive market evolves.

Issue III-5.1: Should consumer education be conducted mainly by market players or by extra-market programs and institutions?

Discussion: DAWG Report, Chapter 11, raises the issue of how to apportion among various entities the responsibility for developing consumers' ability to understand market information and to make intelligent choices. Roles of market players, CPUC programs, IOU programs, and the Restructuring Electricity Services Education Trust (RESET) are all described.

Position: In the near term, prior to the opening of Direct Access on 1/1/98, general messages about restructuring should come from the IOUs. Once Direct Access becomes available as an active choice, both market players and IOU/UDCs should play substantial roles. Comments on the possible roles of RESET will be offered following the October 30 Report of the Consumer Education and Protection subgroup of the DAWG.

Issue III-5.2: How much control over the message should government exert?

Discussion: Various DAWG parties expressed concerns that the consumer education efforts of other stakeholders might be biased. Private suppliers were suspicious of IOUs, and consumer representatives were concerned about both. Various parties were concerned that RESET might be too independent. For these reasons, many parties support a strong role of the CPUC to ensure that the messages provided by their perceived rivals are controlled.

Position: The CPUC should provide general guidance to all of the relevant parties concerning themes of consumer advertising, but should allow market forces to play as large and as free a role as possible. General information about restructuring, including the various options that will be available, should be communicated by utilities in early 1997. Such descriptions should neither support nor oppose Direct Access, but merely enumerate it as an opportunity that will be described in more detail later in the year. Since the economics of participation in Direct Access for residential and small commercial customers are clearly in dispute, it would be premature and perhaps misleading to endorse this choice. Once the CPUC makes all Direct Access decisions in mid-1997, the content of consumer education messages must be refined to reflect those decisions.

III-6. Facilitating Choice Through Billing

Issue III-6.1: Should there be a standardized bill format for all energy service providers?

Discussion: Many DAWG parties argue that a standardized bill will promote small-customer participation by enabling customers to better understand and compare market offerings. IOUs claim they will have major problems providing bills that are more complex than those they currently provide. There is both a lead-time issue and a cost-recovery issue associated with directing IOUs to undertake special billing efforts, whether for Direct Access customers only or for all customers.

Position: We support a standardized bill format for all providers.

Issue III-6.2: Should entities that provide billing services to customers be required to offer various levels of billing service options to customers?

Discussion: As set forth in its Comments on the Ratesetting Working Group Unbundling Report, the CEC maintains that unbundling the billing function is essential for two reasons. First, it will enable and stimulate UDCs to develop and offer differentiated levels of billing services to end-use customers. Second, energy service providers may wish to purchase these unbundled services from the UDCs, rather than incur the costs of providing the service themselves. The ability of emergent providers to avoid certain start-up costs may be vital to their success.

Position: The CEC supports the unbundling of the billing service to create service options that may be of benefit both to end-use consumers and to energy service providers.

Issue III-6.3: Should the customer be required to pay for the incremental cost of these enhancements, or should such costs be absorbed into standard fees?

Discussion: There are two facets to this issue: the development of the standard billing format, and the opportunity to choose among billing service options. The format of the bill refers to the overall look of the bill, i.e. organization and location of information categories. The choice of billing service enhancements refers to the level of detail of information included on the bill.

Position: Customers should be required to pay for incremental costs of service enhancements. The cost of the development and use of a standard billing format should be shared among all customers.

III-7. Customer Notification Requirements

Issue III-7: Should customers be required to notify their existing energy providers before switching or returning to UDC/PX energy service?

Discussion: AB 1890, Section 366(d) and (e), requires verification by the consumer prior to change of providers. It is clearly intended to prevent the abuse known as "slamming" in the telecommunications industry. The bill does not address the need for the existing provider to receive advance notice before a customer elects to change providers.

Position: Due to energy providers' load forecasting obligation, they should be entitled to reasonable notice in advance of the effective date of a change of provider.

III-8. Joint Aggregation of Electricity and Natural Gas

Issue III-8: When marketers propose to provide both electricity and natural gas through aggregation arrangements, what restrictions should be imposed to ensure that full disclosure is made to the customer or to restrict cost shifting between electricity and natural gas operations of a combined utility?

Discussion: It is important to ensure against a competitive energy provider shifting costs to its monopoly affiliate. Parties must recognize that energy service providers may be able to supply both electricity and natural gas.

Position: When analyzing the potential for cost shifting of energy providers that also sell natural gas, both commodities must be analyzed to ensure that no monopoly function is subsidizing a competitive activity.

III-9. Direct Access for Customers of Master-Metered Facilities

Issue III-9: How can residents within master-metered facilities be provided opportunities for Direct Access?

Discussion: The DAWG report focused mainly on the potential for Direct Access availability to mobile home park residents. However, the same situation exists for any master-metered facility, such as apartment buildings.

Position: Master-metered facilities should be treated as small private distribution companies. This would permit residents to take advantage of Direct Access provided they were willing to pay the incremental costs.

IV. Governance of the Competitive Market

A competitive market for electric services will need some governing rules and institutions to ensure appropriate behavior in three areas: consumer protection, fair competition, and system operations. The principal devices to be used in such governance are: registration of market participants, rules governing behavior of participants, and mechanisms for enforcement of rules and redress in case of violations.

Position Summary: The Energy Commission supports: [1] stronger registration requirements than specified by AB 1890, with authority to register and suspend registration vested in a state agency; [2] enforceable market rules to prevent customer abuses and unfair competitive behavior; [3] a fair and accessible process for redress of grievances; [4] allowing utility affiliates to market in their home service territories only if there is broad confidence in the market rules; [5] assertion of state jurisdiction over interactions between Scheduling Coordinators (SCs) and customers, i.e., the retail aspects of SC activities; [6] an assessment of alternatives to having UDCs retain a long-term role of default provider of electric services. The subsections below discuss each of these in detail.

IV-1. Registration of Energy Service Providers

Position Summary: We recommend stronger registration requirements than specified by AB 1890, with authority to register and suspend registration vested in a state agency.

Issue IV-1.1: How extensive should registration requirements be for various energy service providers?

Background: Section 394(a) of AB 1890 states as follows:

Except for an electrical corporation as defined in Section 218 [of the Public Utilities Code], each entity offering electrical service to residential and small commercial customers within the service territory of an electrical corporation shall register with the commission. The registration shall include the following seller information: (1) legal name; (2) current telephone number; (3) current address; and (4) agent for service of process.

Position: The registration requirements of § 394(a) are necessary but not sufficient. At a minimum, providers should be required to disclose evidence of financial soundness, such as a surety bond, and other business information such as proof of good standing, information concerning the business purpose of the entity, and the name, title and telephone number of a customer service representative. Registration requirements for some entities, such as Scheduling Coordinators, may need to be more stringent due to the volume of transactions they will be required to process and the essential nature of their activities.

Issue IV-1.2: What entity should be responsible for energy service provider registration.

Background: AB 1890 charges the CPUC with responsibility of registering energy service providers.

Position: A single state agency with energy expertise should be charged with the responsibility of registering energy service providers. No new entity should be created.

Issue IV-1.3: Should that agency have authority to suspend the registration of an energy service provider?

Background: AB 1890 is silent with respect to CPUC's authority to suspend the registration of an energy provider, or to expand the scope of registration requirements.
Position: The state agency with responsibility for registering energy service providers should have authority to enhance the registration requirements and suspend the registration of providers who no longer meet the requirements or engage in misconduct to be specified in the market rules.

IV-2. Development of Market Rules Governing Participants

Position Summary: We recommend enforceable market rules, developed by stakeholders and enforced by the state, to prevent customer abuses and unfair competitive behavior.

Issue IV-2.1: Should market rules be developed to regulate the conduct of energy service providers?

Background: Existing state and federal antitrust law, and laws prohibiting unfair trade practices, would apply to all market participants. In addition, AB 1890 includes some specific rules governing the conduct of energy service providers, specifically regarding slamming (taking over service of a customer without their authorization) and mandatory information disclosure.

1. Slamming

Sections 366(d) and (e) sets forth detail rules governing the practice of changing electricity suppliers, and prohibits any change accept upon confirmation by the customer in one of several ways, depending on the customer class. For residential customers, change of provider requires independent verification by an independent third party verification company (unless the customer contacts the provider directly). Section 366(e).

2. Information Disclosure

Section 394(b) provides:

Except for an electrical corporation as defined in Section 218, each entity offering electrical service to residential and small commercial customers with[sic] the service

territory of an electrical corporation shall, at the time of the offering, provide the potential customer with a written notice describing the price, terms, and conditions of the service, ...

The notice must also provide the amount and applicability of the CTC and notice of the customer's right to rescind the contract. Section 394(b) also provides that

The commission shall assist these entities in developing the notice. The commission may suggest inclusion of additional information that would be useful to the customer.

Position: In addition to rules governing change of provider and requiring information disclosure, other energy industry specific rules should be developed. In the immediate future, such market rules should focus on the problems associated with the transition from monopoly to competitive supply of generation and other energy services; for example, rules to prevent unfair advantages by competitive affiliates of monopoly service providers (see Section IV-4).

Issue IV-2.2: What government entity should be charged with responsibility to develop market rules, discipline violators and recommend legislative changes?

Position: The same state agency responsible for registration of energy service providers should have the related authority to develop and enforce market rules. This does not require the agency to develop market rules on its own. We believe that the participation of stakeholders in the development of enforceable market rules is essential. There are examples from the natural gas industry in other states where the various stakeholders have developed mutually acceptable rules by consensus, which have then been adopted by the regulatory commissions.

IV-3. Consumer Protection

Consumer protection concerns have been raised by several parties, specifically about the customer abuses that have occurred in the process of telecommunication deregulation. They argue that the universal necessity of electricity for modern life makes the prospect of similar abuses an even greater social problem, and one that must be addressed early. The DAWG Report provided an initial review of these issues in Chapters 2 and 12, but further work is continuing and will be submitted in a separate DAWG Report on consumer education and protection topics on October 30.

Position Summary: We recommend early development of a fair and accessible process for redress of grievances, and careful review of AB 1890 requirements in this area to assess whether they are sufficient.

Issue IV-3.1: What forms of redress and which agency should undertake this as private energy service providers become common?

Background: Representatives of consumer interest groups have been concerned from the beginning that increased reliance upon competition and decreased reliance on regulated utilities will lead to abuse of consumers. DAWG Report, Chapter 12, Section 12.2 amplifies the right to redress described in Chapter 2 of that report. A variety of views are expressed there, since DAWG was unable to reach agreement about the parameters of this right of redress. AB 1890 provides (Section 394(c)) a very limited authorization for the CPUC to assist in resolution of consumer complaints and disputes. In particular:

[1] Customer Complaints. Section 394(c) provides that the "commission shall accept, compile and help resolve consumer complaints regarding entities offering electrical service that are required to be registered pursuant to this section . . ."

[2] Right to Recover Damages and Attorneys Fees. Consumers have the right to adjudicate claims in court for legally recognized damages. If the consumers prevail, they will be entitled to attorney's fees.

Position: We recommend the creation of an informal complaint resolution procedure to allow consumers and providers to resolve disputes, to avoid having to resort to adjudication and to increase consumer satisfaction.

Issue IV-3.2: Should the CPUC (or another agency) require advance approval of prices and terms and conditions of service?

Background: Many parties expressed concern that competitive marketplaces with no fixed prices or terms and conditions of service would create massive consumer confusion, especially since consumers are uneducated about making electricity service decisions. Various proposals to oversee terms and conditions were discussed in the DAWG process. Section 394 (b) and (c), of AB 1890 require a written notice of prices, terms and conditions to be provided to the customer at each offering of service. Section 395 provides for a three day recision period after the customer has signed an agreement. As an example of stronger requirements, the draft rules released for review by the Staff of the Arizona Corporation Commission provide for advance review of prices and terms and conditions before services can be offered to the market.

Position: Advance approval is an excessive intervention in a competitive marketplace. Supervision of competitive market activity is a preferred approach. Notices describing offered terms and conditions and prices, as called for in Section 394(b) of AB 1890, should reveal violations and abusive practices. Oversight should be targeted to those communities likely to be victims of abuse, such as minority and English-limited communities.

Issue IV-3.3: What agency should take the lead in consumer protection efforts?

Background: While the CPUC has developed some ability to assist in resolving consumer complaints for the electric utilities, there are other government agencies that perform this role for the majority of the commercial activity within the economy. When consumer advocates raise the CPUC as the entity to which responsibility should be sanctioned, others cite these alternative agencies. AB 1890, Section 394(c), charges the CPUC with the responsibility for accepting, compiling and helping to resolve customer complaints.

Position: AB 1890 may not provide adequate consumer protection.

IV-4. Limitations on Utility and Utility-Affiliate Marketing Activities

The principal concern here is the potential for competitive affiliates of utilities to have an unfair advantage relative to their competitors by virtue of their affiliation. Potential for such advantage derives from a number of factors, including: access to utility-held customer data bases; implied superiority of service due to affiliation; cost shifting to monopoly activities; name recognition, etc. The two major approaches for dealing with this problem are: (1) devise enforceable "related-entity" rules which define and prohibit unfair practices by utilities and their affiliates, or (2) prohibit utility-affiliate marketing activities within the related utility's service territory.

Position Summary: We recommend allowing utility affiliates to market in their home service territories, but only if there is broad confidence in the adequacy and enforceability of the market rules. We are concerned about the ability to ensure via market rules that utility affiliates will have no unfair advantages over their competitors, advantages that may impede competition during the early years of the competitive market.

Issue IV-4.1: Should utility affiliates be restricted in the areas to which they can market energy or other energy services?

Position: Provided the appropriate "related-entity" rules are in place, utility affiliates should not be restricted from selling energy or other energy services to particular areas. The related-entity rules must ensure against the ability of a competitive supplier to recover cost through its affiliated monopoly. These rules must also ensure that competitive affiliates cannot take unfair advantage of customer information collected by the monopoly or benefit in any way from privileged access to monopoly-held resources.

Issue IV-4.2: Should publicly-owned utilities be restricted from operation in the service area of another utility unless they offer reciprocal rights of marketing in their own service area?

Discussion: Section 9601 of AB 1890 prohibits publicly-owned utilities from engaging in Direct Access transactions with customers of existing IOUs unless they agree to allow their customers to enter into Direct Access transactions.

Position: The reciprocity requirement of AB 1890 is appropriate. However, AB 1890 does not, nor should it, prohibit publicly-owned utilities from buying or selling energy from or to the Power Exchange.

IV-5. Regulation of the Scheduling Coordinator

The DAWG process illuminated the need to clarify further the nature of the Scheduling Coordinator (SC), a new entity that surfaced late in the WEPEX process and that was only briefly outlined in the WEPEX submittal to FERC on April 29, 1996. The DAWG Report, in Chapter 3, Section 3.5, and Chapter 6, Section 6.3, identifies and provides some discussion of SC issues. Among the most central is the question of regulatory

authority over SCs, which must be ascertained so as to identify the proper forum in which to pursue the identified issues. The WEPEX process, which is now developing a second filing with FERC in late 1996 or early 1997, may be making independent decisions about aspects of SC functions and requirements that may have significant impacts on the implementation of Direct Access.

Position Summary: The nature of the SC function and the state's regulatory supervision of SCs should be resolved in a manner that reduces the possibility that Direct Access will be limited by insufficient transactions processing capabilities. In particular, the state should ensure that it has sufficient regulatory oversight of SCs to protect the interests of retail customers.

Issue IV-5.1: What should be the function of the SC, and how can consumer interests be protected?

Background: One interpretation of the WEPEX April 29, 1996 filing with FERC is that the SC function represents the interests of the ISO. The SC provides the interface with the ISO for generators and customers, for purposes of submitting proposed balanced schedules, revising schedules to maintain grid reliability, tracking and settling intermediate trades, and after-the-fact settlement of imbalances of energy, use of ISO ancillary services, and transmission congestion charges. By playing this role the SC ensures that all imbalance costs assessed by the ISO are paid to the ISO by the appropriate parties.

The DAWG process made some progress in clarifying the details beyond those established in the original WEPEX filing, but considerable ambiguity remains. The recently resumed WEPEX process to develop more detailed protocols for filing with FERC in late 1996 or early 1997 does not appear to be fully coordinated with the customer interests expressed in the DAWG report. A potential problem is that the

WEPEX positions on those protocols may be expressed in a way that reduces problems for the ISO by reducing benefits to or protection of consumers.

For example, SC functions can be simplified if all Direct Access customers can be required to have hourly interval meters and electronic data communication systems that permit daily uploading of consumption data for use in daily settlements. Such requirements are virtually certain to be acceptable to bilateral contract customers who have large enough load that such overhead can be readily accommodated. The DAWG report, Chapter 10, Section 10.4.1, and Chapter 5, Section 5.1.4, discuss the benefits of allowing load profiling as a substitute for hourly interval meters and data communication systems, at least as a transition measure, to facilitate aggregation of small commercial and residential customers. Final SC protocols, if developed without addressing the concerns raised in the DAWG Report, might fail to permit estimated loads in lieu of measured loads, even though load profiling could greatly benefit small customers if there is a procedure for fairly allocating imbalance costs among customers using estimated loads.

Position: The functions of the SC should be designed to properly reflect the requirements outlined in the April 29, 1996 WEPEX filing to FERC, but not to implement these requirements in ways that harm or overly restrict small commercial and residential customer interests. Further work to develop SC requirements is warranted.

Issue IV-5.2: Should the SC be highly regulated in order to ensure that customer interests are fully protected, or should customers be relied upon to shift to another SC if dissatisfied?

Background: To date, the WEPEX development of the SC has focused on what the SC function does, rather than how it does it. For example, a principal mission is to ensure that balanced schedules of loads and resources are submitted to the ISO. The

DAWG process examined some of the issues about how customers of the SC would interact with it, what data would be provided, and what processes the SC might perform to accomplish its WEPEX-defined mission. Among these issues was fair treatment of disparate customer types being served simultaneously by a single SC.

The DAWG Report, Chapter 6, Section 6.3, briefly discusses the alternative views of a loosely or tightly regulated SC function. An example of loose controls over SCs is reflected in the proposal that customers provide their own SC services. Large customers are likely to be sufficiently sophisticated that they can perform the required functions and look out for their own interests. If they are dissatisfied with their current SC's services, they can readily shift to another or undertake the necessary functions themselves.

Small commercial and residential customers will have fewer options. These customers are likely to participate in Direct Access only through an aggregator, who has a cost-reduction incentive to self-provide SC services. Residential and small commercial customers are the ones most at risk from abuses stemming from misallocation of imbalance costs or other costs of Direct Access that cannot be determined unequivocally using measured data. If aggregators are permitted to provide their own SC services, the customer will have no independent party judging the aggregator's ability to simultaneously operate as an aggregator and as a SC. While intentional misbehavior is unlikely, there are more subtle issues of cost allocation among customers and the recovery of costs of conducting more or less sophisticated imbalance allocation or load profiling protocols. It is reasonable to assume that these cost allocation activities might require additional regulatory oversight to ensure fair treatment of all customers.

Position: SCs who also provide aggregation services for small commercial and residential customers should be more closely regulated than those serving only the

bilateral contract market, since small customers will have no independent ability to verify cost allocations.

Issue IV-5.3: What regulatory agencies have authority to supervise the SC?

Background: Regulatory authority over the SC must be clarified. Most believe that FERC will regulate the relationships between SCs and the ISO. Some believe that the state should regulate the relationships between SCs and customers, because those relationships relate to the retail side of the market.

Position: The state should assert that it has jurisdiction over all interactions between SCs and customers, i.e., the retail side of SC activities, and should determine how it wishes to regulate these interactions. If FERC were to regulate interactions between SCs and the ISO, this would be consistent with the concept of "cooperative federalism" that has characterized many aspects of electric industry restructuring.

Issue IV-5.4: Will essential SC services present a bottleneck that could limit Direct Access?

Background: The SC concept was developed to reduce the transactions processing burden on the ISO. In the context of all customers having hourly interval metering and daily settlement, the volume of transactions processed on behalf of end-use customers is not reduced by the SC concept, just distributed among a set of SCs. Therefore, the transactions processing capabilities of the SCs and the ISO combined must match or exceed the transactions volume of those who wish to participate in Direct Access. Failure to match or exceed means that capability to process must be increased, implying either a short or long wait for some new customers who wish to enter into bilateral contracts. The wait would be short if SCs were earning profits and happy to expand the scope of their business. The wait might be long if SCs were not profitable or the business arrangements were too risky.

Whether the SC bears any risk in providing these services is still unclear, yet risk may have a major effect on the volume of transactions that all SCs collectively can process. SCs bear risk if they have liability for customer failure to satisfy settlement imbalances. Such risk would arise in an arrangement whereby the ISO collects overall settlement imbalances daily from the set of SCs, and the SC then collects appropriate revenues from end-use customers. An alternative possible arrangement, in the context of multiple SCs allocating imbalances for a single ISO grid outtake node, is that a "lead" SC for that node satisfies the ISO and then works with all other SCs to settle further allocation of that node's imbalances among themselves. In both of these cases at least one SC is at risk, while the ISO may have little or no risk. The risk that comes with the SC function will translate into higher fees for services rendered, reduced willingness to provide these services, and potentially an inadequate supply of the services.

Position: We recommend against any risk-sharing arrangement in which any relevant parties are completely free of the risks associated with imbalances. If the SC bears excessive risk, this may jeopardize the creation of sufficient transactions processing capability to ensure that Direct Access is not constrained. The role of SC must be a sufficiently attractive business that it does not become a bottleneck for Direct Access, and thus a de facto source of rationing of Direct Access. Further specification of SC functions and activities must address these concerns.

IV-6. Universal Service

The restructuring process for the electricity industry in California, and in particular for the investor-owned utilities, has sought to assure customers that they will continue to receive electricity service despite major changes in the industry. D.95-12-063 places an "obligation to serve" on the UDC as the means to ensure that customers may retain energy services from the UDC, or may return to UDC energy service without penalty if

they discontinue Direct Access with a private energy service provider. In its discussion of consumer principles, the DAWG Report, Chapter 2, Section 2.9, shifted the focus of this issue from obligation to serve and reframed it as an issue of "universal access to electricity services."

Position Summary: The CEC believes that the assignment to the UDC of an obligation to serve, i.e., to procure electricity for customers, should be reconsidered as part of a thorough examination of the role of the UDC, the unbundling of the UDC's distribution function into component services, and the opening of these services to competitive supply. We believe there are alternatives that should be assessed that are equally effective in assuring universal service, and that are more compatible with a competitive energy supply market.

Issue IV-6.1: Does D.95-12-063's revision of the traditional obligation to serve and its assignment of this obligation to the UDC satisfy all concerns?

Background: DAWG report, Chapter 12, Section 12.1.1, describes two services that the UDC has been asked to provide to customers: (1) connection through the distribution system to the transmission grid and thus to the generation market, i.e., an "obligation to connect"; and (2) energy service bundled with distribution service if customers wish to remain bundled service customers, i.e., an obligation to serve. No party disputes that the obligation to connect is central to the UDC. Some parties go further and argue that providing the connection in a reliable manner is all that the regulated distribution monopoly should do.

In addition to the obligation to connect, D.95-12-063 requires that the UDC provide bundled energy and distribution service, which may closely resemble current service of the integrated utilities. Parties to the DAWG process have a variety of concerns about this assignment. Among them are: (1) possible cost shifting from Direct Access participants to UDC bundled service customers; (2) responsibility for forecasting loads

of bundled service customers to the PX; (3) impediments to unbundling metering and billing services when the UDC must continue to provide these services to its bundled service customers; and (4) anti-competitive behavior by the UDC once the requirement to purchase power from the PX expires (discussed further below).

Position: The CEC supports an obligation to connect responsibility for the regulated UDC, but we believe the obligation to serve responsibility of the UDC should be reconsidered when the CPUC addresses unbundling of the distribution function. We are concerned that the assignment of energy responsibility to the UDC will create market power problems in the mature competitive market, once the UDC is no longer required to purchase energy for bundled-service customers solely from the PX.

Issue IV-6.2: Is a UDC obligation to serve the best method to ensure that all customers receive energy service?

Background: According to D.95-12-063, the UDC is to be fulfilled by the UDC acquiring energy for its full-service end-use customers from the Power Exchange and providing it to them at no markup. Some parties describe the UDC as a "default aggregator" because of this energy service role. Others assert that the Power Exchange should be the entity having the obligation to serve, since it is the entity that must take UDC load forecasts and find generation resources to match.

By imposing an obligation to serve on the UDC, all customers are eligible to remain bundled service customers and to receive power through the UDC from the Power Exchange at the spot price. In effect, customers wishing not to participate in Direct Access may choose to do nothing, and they will continue to be served with no change other than a modest increase in the number of separate line items on their bill describing the cost elements that comprise the total bill. Further, the CPUC explicitly rejected any conditions or limitations on the return to UDC service by those customers who test Direct Access and decided to return to bundled service.

This formulation of UDC responsibilities accomplishes two things. First, it provides a safety net for those customers unable to secure the services of a Direct Access energy provider for whatever reason. Second, by placing this energy obligation on the UDC with a mandate to purchase only from the PX, it prevents anti-competitive behavior but only as long as the mandate lasts. Once the requirement that the UDC purchase all power through the PX expires, then the UDC will become an active marketer of its own energy resources in competition with private businesses, along with a ready-made set of captive customers.

Alternative approaches exist to ensure that customers requiring a safety net are accommodated, but which also eliminate the potential for the UDC to become a subsidized, regulated monopoly competing with private energy service companies. At least three alternatives exist. First, the CPUC could adapt the local default provider approach it pursued in local exchange telephone services. In that approach, the default provider receives a subsidy for serving certain high cost areas, thus providing an incentive for competitors to assume the default provider role. The electricity version of this program might utilize a subsidy for high cost of service customer groups, rather than high cost geographic areas as in the telecommunications approach. Under this approach there may actually be more than one default provider.

Second, customers failing to exercise a choice of energy service provider might simply be assigned to one of the competing providers in some proportional manner, as the FCC ordered for AT&T, MCI and Sprint when AT&T's long distance monopoly was broken up. Third, subsidies could be provided to individual customers based on need, which would enable them to respond to "high priced" offers from energy service providers that they could not normally afford because of low income. Each of these approaches disconnects universal service from the UDC, which permits the CPUC to consider the desire of several parties to shrink the responsibilities of the regulated distribution company to a smaller set than D.95-12-063 assigned to the UDC.

Position: The CEC supports further examination of the obligation to serve, to see that the need to ensure electricity service for all consumers does not perpetuate the UDC as a regulated monopoly that may later enjoy an unfair competitive advantage over private energy service providers. We believe some of the alternatives described above may be preferable for one or more of the classes of customers who are likely to remain bundled service customers of the UDC. The obligation to serve should be examined in the context of unbundling the UDC's distribution function into component services. A final decision to reform this responsibility of the UDC should be completed well in advance of the expiration of the requirement that the UDC purchase all power from the Power Exchange and supply it at no markup to customers wishing to receive bundled service.

V. Metering, Data Communications and Information Management

Position Summary: The central tenet of this section is that the information requirements of the restructured market should drive the design and implementation of new systems — hardware, software, protocols and institutional arrangements — for metering, data communication and information management. WEPEX and DAWG agree that the consumption information required of customers in the restructured market will be hourly usage data reported daily, regardless of whether or not a customer chooses Direct Access. Hourly data, reported daily for all customers, will be needed by the ISO, the PX, the Scheduling Coordinators and the UDCs for essential functions including transmission and distribution system operations, load forecasting, settlement of imbalances and billing for distribution services. More fundamentally, the goal of enhancing societal economic efficiency will best be served if energy consumption for all customers is measured and reported for each hour.

The above argument leads to the conclusion that interval metering should be a requirement for all customers in the restructured market. Indeed, this should be the

case eventually. For the near term, however, to facilitate participation of small customers, hourly usage may be estimated using statistical load profiles, given a sound methodology and a timetable for implementing a universal interval metering system (see Section III-1 for more discussion of load profiling).

In the competitive market, hourly usage information will be extremely important for a variety of activities beyond the operational needs of the system, including public-interest research, market research and marketing by service providers, accurate allocation of the CTC to customers, and energy-usage analysis by customers themselves. The CPUC should direct a stakeholder working group to take a comprehensive view of information flows in the restructured market, to assess alternative arrangements for managing customer usage information, and then to incorporate this effort into the development of metering and data communication systems to support the desired arrangements. Such an effort should begin as soon as possible.

V-1. Information Management to Support Consumer Choice

Position Summary: The design of a communication and information management system to support universal interval metering should incorporate the following considerations:

1. Hourly usage data for all customers — individually for larger customers and at some level of aggregation for smaller customers — will be needed by the ISO, the PX, the SCs and the UDCs for system operations and settlements.

2. Metering devices at customer premises will likely be supplied by multiple competing firms, and all must be compatible with an integrated statewide or ISO-wide communication system.

3. Metering devices and services may be a highly innovative area. They may measure several utility functions (e.g., electricity, gas, water, home security) and may incorporate a variety of as-yet-unknown features.

4. Customers should be able to easily access their own current and historical metered data, and should be able to authorize a third party to do so.

5. Retailers or aggregators of customer load may be permitted to do their own billing — or to contract out billing to a third party — in which case they will need at least monthly readouts of customer usage data.

6. A societally efficient market place requires a healthy free flow of information, in balance with legitimate privacy and proprietary rights. The optimal balance remains to be determined.

To develop a unified approach to resolving these needs, the CPUC should direct stakeholders to consider the design and creation of an INFOCO, a single statewide entity that would be responsible for ensuring the flows of customer usage data from the customers' meters into a central usage database and out again to the various parties that need the data. The INFOCO's primary functions would be: to coordinate the design and implementation of a system that would serve the information needs of the new marketplace in the most societally efficient way; to coordinate the data collection, management and dissemination activities of the system; and, to perform certain natural monopoly elements of that system such as management of a statewide database.

The whole system would thus be comprised of both competitive-market and regulated-monopoly activities and entities. Because of the central importance of the INFOCO to the competitive electric service market and the power system, it should be a monopoly with oversight performed by a regulatory agency and/or a board of directors representing all stakeholder groups. The working group that addresses information management should investigate the VISA bank credit-card system, which is a not-for-

profit system owned and operated by participating banks and which offers a potentially useful model for the electric services industry.

A single statewide INFOCO would be preferable to a set of smaller regional INFOCOs because the system it oversees must serve multi-site electric service customers, statewide load aggregators and a statewide ISO, and because there will be economies of scale in organizational and regulatory overhead.

Issue V-1.1: Should interval metering and electronic data communication be controlled by competitive or monopoly decision-making?

Background: DAWG Report, Chapter 8, Section 8.7, assesses five alternative institutional means to obtain usage data. In that context the word "obtain" includes all of the services of metering, data communication, and updating a customer usage database. These alternatives range from a purely competitive business to a centralized INFOCO that would collect electric, natural gas, water, and perhaps other measurements and upload them on a common data communication system to various businesses that require the information. There are various advantages and disadvantages for each of the five alternatives.

DAWG Report, Chapter 8, attempts to distinguish between ownership, operations, and control of decision-making. Of these, the decision-making aspect is the most important. For example, it is relatively unimportant whether the customer, the energy supplier, or the distribution monopoly owns the meter. What is most important is that the meter meet necessary standards for the nature of the data collected, the frequency of collection, and the interface protocols for the data communication system, that the meter's performance be certified as within required tolerances, that the meter be read in a manner that is protected from tampering, and that the meter be maintained so that its performance through time is assured.

Position: A centralized INFOCO has the potential to deliver the greatest benefits to society by providing a systematic approach to the data flow needs of the marketplace, by amortizing the costs of the core data communication systems over the most activities, and by offering greatest flexibility for customer choice in selecting suppliers of services, since the data system would be independent of the physical supplier selected. The INFOCO concept should be investigated further to see how the institutional issues it provokes can be resolved.

Issue V-1.2: Should usage database maintenance and updating be unbundled from the UDC?

Position: Database management should be unbundled from the UDC, but it should not be made competitive. Instead, a statewide INFOCO should be created with the mission of managing information flows needed for the market-based electric system and for ensuring the design and implementation of the metering and data communication systems required for efficient information management.

Issue V-1.3: Should usage database services be made competitive? If so, what role should the regulated monopoly play?

Position: Database services need to be centrally coordinated, preferably in a cooperative fashion by industry stakeholders with the regulatory agency playing an adjudicatory role as needed.

Issue V-1.4: Preparation of UDC load forecasts for the PX. What method of preparation of UDC energy service customer load forecast should be used by UDCs in submitting their energy forecasts to the PX?

Background: DAWG parties proposed two methods for computing UDC load forecasts: a direct method whereby loads would be forecasted for all UDC full-service customers,

and an indirect or net method whereby UDC system loads would be forecasted directly, and then Direct Access loads would be subtracted to obtain UDC full-service loads.

Position: All service providers, including UDCs as default providers of bundled service, should be responsible for forecasting the loads of their customers. The UDCs should forecast loads for their customers by the direct method, without relying on the forecasts or schedules submitted by other parties.

V-2. Interval Metering and Electronic Data Communications

Metering has been a difficult issue to resolve from the beginning of the restructuring process. Participants have wrestled with issues of cost, control of the systems, and practical concerns of installation lead-times for universal interval metering. Diametrically opposing "lessons learned" from the UK and other countries have been offered. Alternative views supporting or constraining broad installation of advanced meters have appeared in various CPUC decisions. For example, the proposed May 1995 CPUC decisions required RTP meters for all customers, but the final position adopted in D.95-12-063 only imposed such metering on customers with loads 100 kW and larger.

DAWG examined a wide range of issues associated with metering. From the beginning, it was clear that the scope of the issue involved meters and data communication systems, even through the CPUC decisions refer only to meters. Further, it was clear that metering and communication systems for Direct Access participants could not be examined in isolation from other issues, including: (1) the mandated UDC installation of RTP/TOU meters on a phased basis for all customers with load 100 kW or larger, (2) the necessity for any customer to have an RTP meter installed in order to participate in "Virtual Direct Access," and (3) efforts of the existing utilities to examine advanced metering and data communication systems for

implementation in their service areas. Finally, many parties urged that metering and data communications not be examined simply as an electricity restructuring issue, but as part of electricity, natural gas, and perhaps other utility services that could utilize a common data communications system.

Issue V-2.1: Should state policy commit to universal interval metering and electronic data communication for utility services?

Background: CPUC D.95-12-063 requires RTP/TOU meters for all customers 100 kW and above. Utilities and successor UDCs are directed to install such meters on a five year schedule, based on customer size. Further, any customer may have the UDC install an RTP/TOU meter and become a "Virtual Direct Access" customer enjoying the benefits of Power Exchange prices.

WEPEX appears to have presumed that all Direct Access customers would have such equipment. Much like the UK system now in operation, the WEPEX filing to FERC of April 29, 1996 presumes that imbalances are determined on an hourly basis and settlement takes place daily. After considerable discussion, WEPEX developed the Scheduling Coordinator (SC) concept as an entity that shielded the ISO from the large volume of transaction processing implied by the notion of hourly data settled daily. The idea is to have a set of separate SCs to process subsets of the total transactions, rather than requiring the ISO to process everything in a single data processing system.

While the CPUC and WEPEX perspectives both require an hourly interval meter, their perspectives could lead to different conclusions about data communication systems. The CPUC focus on RTP meters emphasizes the customer obtaining a price signal from the PX in real time. Several technologies could provide a price signal that would permit customer response through manual adjustment of usage. An electronic data communication system would provide an electronic signal that would permit direct control of appliances and other electricity-using equipment with appropriate controllers

and computer-assisted decision rules. Many utilities and others are experimenting with the "house of the future" which is capable of automatic control of usage according to decision rules established by the resident. Thus, the CPUC focus on RTP signals emphasizes a signal from the PX that is downloaded to the customer.

The WEPEX focus for communications, on the other hand, is on measurement of actual loads, transmitting that data to either the SC or the ISO, for use in computing imbalances and settling imbalance costs. This focus leads to an emphasis on outbound usage data that is uploaded from customer premises to some computer system for use in cost allocation.

In examining the various issues associated with interval metering and data communications, DAWG attempted to distinguish between the metering activity and the data communications activity. For example, many different metering technologies might be feasible for measuring usage on a fixed time interval. Electronic meters are now available that can be reprogrammed remotely, can be interrogated at will, that can have the usage sampling interval modified remotely, all at relatively low cost in volume production. Data communication systems have to be designed to interface with a specific meter to turn these potentials into functional capabilities. Further, there are some data communication system technologies that have costs closely linked to percentage saturation. For example, a radio communication system costing $1000 per year to install and maintain per neighborhood, would cost $100 per year per customer if ten out of the 100 customers in the neighborhood used its services, but would cost only $10 per year per customer if all 100 customers used its services. Alternatively, a dedicated telephone line-based data communication system might cost $100 per year per customer irrespective of the number of customers in the neighborhood using the technology. Thus, communication system technologies exist for which the ultimate cost per metered customer would be lower with universal systems than with piecemeal systems.

Position: The potential benefits to all customers of a universal metering and data communication system are sufficient that state policy should establish this as a five year goal. Now that some technologies having the potential to achieve lowest cost per customer have been identified, and more may be forthcoming, further progress on developing the optimal system awaits a public policy decision on universal interval metering. Once such a decision is made, the stakeholders may proceed with assessments of alternative systems for achieving the policy mandate. In addition, the Energy Commission may be able to stimulate the emergence of even lower-cost hardware and other new systems options through RD&D funding.

Issue V-2.2: What is the basis for asserting that electricity, natural gas, water supply and other services should utilize a common data communication system?

Background: At this time, the CPUC treats electricity, natural gas, and water supply as totally separate industries. These services have had minimal interaction with each other or with tele-communication utilities, because the data communications technology has only recently become cost-competitive with traditional manual techniques (e.g. human meter readers walking a route). SDG&E and PG&E utilize common meter readers for their natural gas and electricity operations, but the traditional question has been allocation of common costs for ratemaking purposes.

Technologies are now available to substitute for the manual data collection and uploading processes for each of these utility services. It is true that the required frequency of measurement for electricity will exceed those of other services, i.e., electricity requires hourly measurements uploaded daily, while natural gas and water may suffice with monthly measurements uploaded monthly. Thus the motivation for pursuing electronic data communication systems is clearly driven by electricity, but the cost savings from displacing manual meter reading is essentially the same for each of the three services, e.g. a human meter reader walking a route on a monthly basis. If

the design of a data communication system is determined by electricity, surely natural gas and water could follow along. It is likely that technologies that are not cost effective for natural gas and water separately can achieve cost savings for those services when combined with electricity, and thus may be the best solution for all of them.

Position: Further examination of interval metering and data communication systems should be on a multiple utility service basis. The potential for economies of scope is strong, but the present separation of these utilities and absence of strong motivations by competitive firms to address all utility services requires that a public policy decision force this framing of the issue.

Issue V-2.3: How can consumer choice, unbundling of distribution services, and mandated installation of meters and communication systems for some customers be reconciled with a public policy goal of universal metering for all customers?

Background: All of these factors are somewhat inconsistent with each other. A brief review of the different perspectives will reveal conflicts among them.

A consumer choice perspective would propose that each customer be provided the greatest possible latitude to exercise a choice of metering and data communication systems. Maximum choice would appear, at first glance, to require that the choice not to have an interval meter be an allowable option.

Unbundling of distribution services and allowing private businesses to provide these services competitively suggests multiple providers of metering services, and perhaps different and incompatible technologies. Standards are required by D.95-12-063 before the CPUC will permit unbundling of metering from the distribution services assigned to the UDC.

The utilities and their successor UDCs are directed by D.95-12-063 to install hundreds of thousands of RTP/TOU metering and data communication systems by year 2003. These regulated monopolies will want to ensure that the capital costs of these systems are recovered, and appropriate returns on investment provided to shareholders. Since the targeted customers are those most likely to want to participate in Direct Access, it is unclear how an IOU/UDC mandate can be consistent with energy supplier expectations of unbundling metering services.

Position: A universal metering system will likely be the cheapest for all customers, and may provide greatest flexibility to consumers to shop around for energy among competing energy service providers without having to change meters when they change providers. An electronic communication system to deliver a RTP signal from the PX may be crucial for achieving the most economically efficient use of the overall electricity system, since without proper price signals it is unlikely that a competitive generation industry could be induced to build the generation capacity that matches consumer demand. With these price signals the industry will either build too much or too little.

No single perspective should dominate this decision. A solution that seeks to increase economic efficiency would be best. This may mean that consumers are constrained somewhat by the requirement to have an interval meter, that energy service providers have to cooperate and coordinate with utilities, and that traditional lines of demarcation between electric, natural gas, and water utilities must be overcome.

V-3. Developing Standards for Meters and Data Communication Systems

D.95-12-063 assigned metering to UDCs but provided an opportunity for non-utility suppliers to install meters once standards had been developed. DAWG participants

devoted a substantial effort to metering issues, but did not accomplish development of a proposed standard. Many issues remain to be discussed, and there is no evidentiary basis for CPUC action without further effort to develop a proposal.

Issue V-3.1: Should a standard for metering and communication systems be developed anticipating utility installation and operation of advanced metering and data communication systems, competitive installation and operation, or a mixed approach in which both regulated entities and private companies both install and operate such equipment?

Background: D.95-12-063 couched development of standards in the context of permitting non-utility installation of meters once such standards had been promulgated. As DAWG studied the issue, it has become clear that meters and data communication systems may need some separate and different treatment. Further, the upstream activities of maintaining a customer usage database and billing of services are interrelated with metering and data communications. Further, the scope of the metering question continues to alternate between those customers participating in Direct Access, those customers required by the CPUC to have RTP/TOU meters installed on a fixed time schedule, and all remaining customers that a universal metering policy would affect. While it is possible to imagine that private, competitive metering business would be able to satisfy the volume of activity necessary to support Direct Access, it would be impossible to imagine an uncoordinated process fulfilling a policy goal of universal interval metering within a five year time frame.

Position: Standards and standard practices should be developed for implementation by several different types of entities, and to be consistent with universal installation of interval metering and electronic data communication systems. Even if metering and data communication systems are ultimately unbundled from the UDCs, it is likely that the utilities and UDCs will need to play important supporting roles.

Issue V-3.2: Should standards address the equipment alone, or its installation, maintenance, ongoing operational usage, and periodic verification of performance?

Background: The DAWG Report, Chapter 8, describes various facets of the metering business that would have to be examined further in order to permit a competitive industry to accomplish metering and data communication with the quality and control traditionally undertaken by the utility industry. Installation, maintenance, operations and verification of performance are all necessary irrespective of what entity performs the work, and will have to be extended to address new activities when data communication is performed using electronic means rather than human meter readers. The suggestion for creating standards for these support activities is to ensure that the metering function and the data communication function are accomplished with the same data integrity that has been traditional for the industry.

This issue reveals the somewhat unique requirements of electricity and natural gas services, in that usage of their product is not known in advance or without installing measurement equipment at customer premises. Thus, the integrity of data collection is a much heightened concern simply from a revenue assurance perspective, unlike any other services such as telecommunications or other industries.

Position: Standards and standard practices that are auditable and periodically verified should be established for any entity whose efforts will supplant those of the regulated monopoly and whose integrity is essential for proper collection of authorized revenues.

Issue V-3.3: What entities must approve a standard?

Background: There are two distinctly different issues here. First, what entities are legally permitted to establish a standard for electric hardware and/or software used in data communications. Second, what role can the CPUC or other entities of government in California play in requiring conformance with a given standard as a condition of unbundling and competitive supply of metering and data communication services. While the language of D.95-12-063 suggests that the CPUC will create a standard, the CPUC is not legally permitted to do so. The CPUC may, quite properly, require competitive supply of metering and data communication services to adhere to a given standard that has been created by an appropriate entity. It may also impose standards of practice on entities providing electricity services if the Public Utilities Code allows this or can be amended to allow this.

Position: If a formal standard is required for metering and data communications hardware, then a proposal developed by DAWG and approved by the CPUC should be submitted to the appropriate standard setting body. The CPUC or other government entities in California should establish conditions of competitive service that require adherence with such standards, even if they are still in the proposal stage and have not yet completed the standard approval process.

Issue V-3.4: What entity should be responsible to develop proposed standards and submit them to the CPUC?

Background: CPUC D.96-03-022 directs what is now called the Direct Access Working Group to develop proposed standards. DAWG formed a metering and communication systems committee to focus on the technical aspects of these topics, especially the prospective standard setting work activities. On July 9, 1996 at a CPUC-initiated "checkpoint meeting," DAWG informed the two CPUC Assigned Commissioners that this would not be possible by the August 30, 1996 due date for the DAWG Report, but that DAWG could promise two things: (1) a summary of the standards development process would be included in the August 30 report, and (2)

later submission of proposed standards. Unfortunately, differences among the DAWG participants that emerged in the final September 12 meeting make development of that standard infeasible without further direction from the CPUC and/or the Assigned Commissioners. Apparently some members of DAWG require the CPUC to clarify that standards are to be developed for governance of non-utility provision of these services.

Position: CPUC and/or Assigned Commissioners should direct DAWG to reconvene its metering and data communication systems committee to develop appropriate standards under a specific set of proposed CPUC policy decisions about the unbundling of metering and data communications services from the other responsibilities of the UDC. This additional direction should specify a time frame by which proposed standards are to be submitted to the CPUC for review.

V-4. Unbundling and Competitive Supply of Metering and Data Communication Services

While unbundling of the distribution function into component services is formally assigned to the Ratesetting Working Group (RWG), the issue was seen to be of fundamental interest to the DAWG participants. Emergent suppliers are vitally interested in whether services they expect to provide as a normal course of their business relationship with customers (measuring usage, communicating usage data to headquarters, analyzing usage to render a bill, billing customers and processing receipts), will be done in parallel to, or in concert with, similar distribution services presently undertaken by the utility, and prospectively assigned to the UDC.

The DAWG Report documents at great length various issues and concerns with unbundling metering, data communications and billing activities. It is no surprise that many customers and suppliers wish to have these services unbundled from the UDC, so that duplication of services provided by the energy supplier can be minimized. Whereas the August 26, 1996 report of RWG to the CPUC and the Comments provided

by parties on September 13, 1996, mainly discuss the process of unbundling and the regulatory treatment this requires by the CPUC, the DAWG Report provides much of the detail of how this might work in the real world.

Metering and data communications are the front end of a sequence of services that SDG&E has referred to as "revenue cycle services," which include: (1) measuring customer usage with a meter; (2) communicating these measurements from customer premises to a common database; (3) maintaining a usage database to support billing and analysis of usage-related distribution services; (4) actual billing by one or more entities providing service to a given premise; and (5) revenue processing from remittances and debt collection efforts.

Issue V-4.1: Should metering and data communication services be unbundled?

Background: CPUC Decision D.95-12-063 assigns all distribution and customer services to the UDC. It permits non-utilities to install meters once a standard is developed and implemented. In Decision D.96-03-022 the CPUC initiated an unbundling investigation to be pursued in the Ratesetting Working Group (RWG). Participants in the RWG could not resolve some fundamental differences, however, and the issue has been returned to the CPUC for decision and/or further guidance. Similarly, DAWG investigated this issue at length (DAWG Report, Chapter 8, Section 8.7), but could not arrive at a consensus position.

Position: The CEC has supported unbundling of metering and data communication services in its formal Comments to the CPUC on the RWG report (submitted September 13, 1996). The CEC describes unbundling as the separation of services and the opportunity for end-use customers to elect different levels and qualities of service, and for energy service providers to utilize one of more of these services as

intermediate inputs for the services they provide to end-use consumers. Unbundling in this narrow sense means that these would continue to be provided by the regulated monopoly. Whether any of the services should be opened to supply by non-utility entities is a separate question.

Issue V-4.2: If these metering and data communication systems services are unbundled, should they be made competitive? If so, what role should the regulated monopoly play?

Background: The DAWG Report (Chapter 8, Section 6) estimates the cost per customer of interval metering and data communication systems for different degrees of customer saturation. Universal coverage appears to provide the lowest cost per customer. Multiple systems would therefore be more expensive, and would reduce the flexibility of customers to select different energy providers if there were any incompatibilities between systems. Since standards are required before non-utilities could install meters, unbundling and competitive supply of unbundled services are two distinctly separate steps.

Position A: Examining metering and data communication systems as an electricity only issue, ignoring natural gas, domestic water, and perhaps non-utility services would be a fundamental public policy mistake. Proceeding directly to competitive supply of electricity metering services and electricity data communication services would ignore the possibility that a joint data communication system serving all such services is the best solution. Unbundling but without competitive supply may be the best interim solution, since the differential needs of various customers could be accommodated by supplying these services in different levels for different fees, either directly to the end-use consumer or to the energy service provider as an "intermediate" service.

Position B: Once metering and communication systems standards are established, customers could be permitted to install or have their supplier install any metering and data communication system that fit into a "master plan" for universal metering. If at some point into the restructuring process (two years) incompatible metering and/or data communication systems are being installed, then a reassessment of metering and communication systems standards and UDC requirements might be needed.

VI. Monitoring, Cost Recovery, Franchise Fees

VI-1. CPUC Monitoring of Direct Access Implementation

Issue VI-1: What is the nature of the monitoring and oversight that the CPUC should conduct of the IOU and industry "gear-up" efforts and the implementation of Direct Access?

Discussion: The DAWG Report, Chapter 13, Section 13.1, provides a brief description of this role. If the CPUC adopts a multi-year phase-in program, requires IOU/UDCs to ensure that participation in such a multi-year program is representative of all customer classes, or wishes to take efforts to maximize actual participation in Direct Access given a phased eligibility, then a much more complex program would be created than would be the case without these features. A corresponding large oversight role would be required to ensure that these efforts were implemented properly, because the CPUC would have to be monitoring many more variables and judging whether the program was "on track." Separate from these eligibility oversight activities, the CPUC would be reviewing the performance of the program for participants, looking for abusive marketing practices and various forms of cost-shifting that might take place.

Position: By relying upon a largely market driven phase-in process, the CPUC can avoid a complex oversight of eligibility rationing portion of its monitoring program, and concentrate its efforts on market performance aspects.

VI-2. Recovery of IOU and UDC Implementation Costs

Issue VI-2: How should IOUs and UDCs recover various incremental costs associated with implementation of Direct Access? Does AB 1890 constrain the means by which such costs are recovered?

Position: All reasonable implementation costs borne by the IOUs and UDCs should be recovered.

VI-3. Franchise Fees and User Surcharges

Issue VI-3: How can the franchise fees and resident user surcharges now collected by the utilities for municipalities and state agencies be continued under Direct Access?

Position: The CPUC should support the efforts of various jurisdictions to ensure that industry restructuring is fiscally neutral for them.

VII. Further Use of Stakeholder Working Groups

The DAWG report of August 30, 1996 and these CEC Comments have noted numerous places in which further stakeholder working groups could be used to further develop various aspects of Direct Access programs, or the supporting arrangements where Direct Access participants interface with UDCs. The purpose of this section of CEC Comments is to provide general support for the continuation of the working group mechanisms as an integral element of the restructuring process, and to summarize some of the key activities for which working groups should be requested to continue developmental efforts.

VII-1.General Observations

The CEC believes the DAWG process was effective in bringing together a wide range of parties, many of whom had limited knowledge of the subject before the process began, to develop a menu of the options that existed to design Direct Access programs, and to provide an assessment of these options. Given apparent disagreement about the desired nature of Direct Access programs, DAWG chose to avoid any attempts to achieve consensus or to make substantive decisions, but to provide a range of alternatives to the CPUC. The DAWG report of August 30, 1996 is a major accomplishment.

We believe that DAWG was effective in accomplishing most of the assignment provided by the CPUC because of three things. First, DAWG participants wisely chose operating procedures that were inclusive and that moved the process along in a way that allowed parties to have faith that their views would be heard, thus permitting parties to use their resources to develop detailed assessments of many topics. Second, the CPUC provided an explicit assignment to DAWG which provided focus for the group's efforts. Third, DAWG participants provided substantial staffing resources that enabled a large effort in both developing position papers, and in writing and editing a comprehensive report documenting DAWG's results.

We believe that the process DAWG followed can be repeated, perhaps even with some process improvements based on experience, to provide further elaboration on selected topics that require further assessment before a final policy position can be reached. if the CPUC can provide a specific assignment to DAWG, or to a group that emerges from DAWG, then we believe the parties can provide a reasoned response from which the CPUC can make a decision. We believe that this approach reduces the polarization among parties that results from unnecessary adjudication of misframed issues, where none of the options advocated by the parties offers the best

public policy decision to the CPUC for it to select and refine through as subsequent adjudicatory process.

VII-2. Developing a Detailed Implementation Plan

All parties recognize the complex interweavings of numerous topics raised within the DAWG Report, as well as efforts being conducted within the Ratesetting Working Group and with issues such as CTC now in adjudicatory processes, that must all come together before the details of Direct Access programs can be implemented. Parties do have different views, however, on what role the CPUC and the parties can play in accomplishing the desired result.

Issue VII-2: Once the CPUC makes the fundamental decisions needed to shape a Direct Access program, should it develop the remaining details of the program or ask the parties to develop an implementation plan?

Discussion: DAWG Report, Chapter 13, Section 13.1, outlines two possible approaches the CPUC may follow once it resolves the major decisions shaping Direct Access. The first is to make a series of secondary decisions in light of the primary decisions, making the tertiary decisions in light of primary and secondary decisions, culminating in a detailed decision answering all program elements, which the IOUs would then put into effect. The alternative is to make the major decisions shaping the nature of Direct Access, and then ask DAWG to reconvene so that a stakeholder forum can develop a conforming implementation plan, which the IOUs and other relevant parties would then put into effect.

Position: Since there are innumerable details that shape a comprehensive Direct Access program, including those discussed but not resolved in the DAWG Report plus others emerging from the RWG and other processes, the CPUC should focus on

making all the major decisions in a timely and consistent way. Once the primary decisions are rendered by the CPUC, the secondary and tertiary decisions should be addressed by a working group directed to develop a conforming implementation plan. Involving parties other than IOUs is essential to ensure that emergent market participants and other parties are supportive of the implementation plan. A broad stakeholder group is therefore preferable to placing sole responsibility in the hands of the IOUs.

VII-3. Fining Use of Hourly Interval Data as Load Profiles for Settlement and Load Forecasting

The DAWG Report, Chapter 10, Section 10.4.1 and Chapter 6, Section 6.4.4, describes ways in which interval metering information will be used by the UDC and/or by aggregators for load profiling and load forecasting, respectively. Both of these areas had disputes among DAWG participants about the roles and responsibilities for use of this data for applications which are documented in the report.

The CPUC can, and should, make policy decisions about the use of load data in the form of load profiles for imbalance settlements, and in the form of load forecasts for submissions by UDCs or aggregators to the Power Exchange. Once the policy decisions are made, however, we anticipate that a stakeholder process would be useful to develop the details of these applications. The details are not as yet well focused, and it would be premature to adjudicate the details of how accurate load profiling or accurate load forecasts should be developed.

The technical details of using load data in both of these areas will be of interest to aggregators and to UDCs, so it is unwise to assign this refinement to utilities alone. A stakeholder group should be directed to develop options or alternatives regarding accuracy standards for load profiling and the assignment of responsibility for

developing accurate load forecasts. Such a group should be able to reduce the disputes among stakeholders compared to adjudication of issues at this time.

VII-4. Refining Scheduling Coordinator and Customer Interactions and Coordination Among Scheduling Coordinators

The DAWG Report, Chapter 3, Section 3.5, clearly outlines a series of details to be finalized regarding coordination among SCs and interactions between SCs and customers. As noted in Section IV-5 of these Comments, the CEC believes that interactions between SCs and customers should be regulated by the state.

The CEC believes the discussion contained in the DAWG Report, Chapter 3, Section 3.5, is incomplete, and the CPUC should direct the DAWG to further narrow the disputes about the activities of SCs downstream to customers. The WEPEX process is currently attempting to refine the "upstream" SC-to-ISO interactions that will be regulated by FERC, and it is in the interests of the state to establish a parallel development of "downstream" requirements. Clear and consistent upstream and downstream requirements are essential for those entities interested in becoming SCs and offering these essential services to make their business planning decisions, and to be operational by late 1997 when SC services will be required by Direct Access market participants.

The CPUC should reduce the range of differences present in DAWG Report, Chapter 3, Section 3.5, and then assign DAWG to fully develop the downstream requirements for SCs and bring a proposal back to the CPUC for its action or for legislative concurrence if necessary.

VII-5.Developing Metering and Data Communication Standards

The DAWG Report, Chapter 8, Section 8.9, describes the possible approaches to development of standards for metering and data communication systems. Section V of these Comments has noted the need to continue this process. At the September 12, 1996 DAWG meeting, those DAWG parties who believe that CPUC clarification of a standard setting assignment is needed prevailed over those for whom the assignment seemed clear already. As a result, DAWG is not going to work to develop standards as discussed in Section 8.9 until the CPUC issues clarifying instructions.

The CPUC should request that DAWG, or some successor group, develop proposals on metering and data communication standards for submission to the CPUC. Ideally, such a request should be made in the context of a specific restructuring environment as determined by the major implementation decisions now facing the CPUC. We recommend, however, this working group not wait until all the major decisions are made. The working group should, with CPUC direction where possible, define a few basic scenarios that capture the range of likely future environments and address the standards question for each scenario. The proposals should be documented in a report, perhaps structured as the August 30, 1996 DAWG Report, which provides background and alternatives described by pros and cons.

VII-6. Management of Metering Data and Other Customer Information

As noted in Section V of these Comments, there is a need to examine the information flows and information needs of the mature electric services market place in a systematic fashion, and to use such a systems overview as the basis for designing and implementing new metering and data communications infrastructure (see Section V-1 for a further discussion). The CEC believes that this undertaking should begin as soon as possible and should involve all parties who wish to participate, in a working group format similar to the DAWG. Moreover, this effort should be carefully coordinated with

the development of metering and data communication standards as described in the previous item.

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Respectfully submitted,

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